

Amendments to the Claims

The following listing of claims is intended to replace all prior versions or listings of the claims in this application (in the unlikely event that a claim number previously recited is not listed, the previous claim will remain):

1. (currently amended) A method for improving the antimicrobial activity of a polymer derived from acrolein monomer wherein the polymer has been oxidized in air to form an ~~oxidised~~ oxidized acrolein polymer comprising carboxyl groups, said method comprising:

providing a solution of the oxidized acrolein polymer comprising carboxyl groups in a mixture containing water and a ~~hydroxylic~~ solvent ~~including~~ comprising an alcohol selected from the group consisting of polyols, polyethylene glycols and alkanols; and

heating the solution at a temperature in the range of from 40 to 150°C for a period sufficient to improve the antimicrobial activity of the acrolein polymer.

2. (currently amended) A method according to claim 1 wherein said ~~oxidised~~ oxidized polymer comprising carboxyl groups is formed by a method of heating a solid acrolein polymer in air at an elevated temperature to form carboxyl groups.

3. (currently amended) A method according to claim 2 wherein said oxidized acrolein polymer comprising carboxyl groups has been formed by heating in air at a temperature between 80°C and 100°C.

4. (currently amended) A method according to claim 2 wherein the oxidized acrolein polymer comprising carboxyl groups has been formed by heating in air at a temperature of about 85°C.

5. (currently amended) A method according to claim 1 wherein the pH of the ~~solvent~~ solution is in the range of from 7 to 9.

6. (currently amended) A method according to claim 1 wherein the pH of the ~~solvent~~ solution is about 8.

7. (currently amended) A method according to claim 2 wherein the solvent solution includes an alkali selected from an alkali hydroxide, alkali carbonate and mixtures thereof.
8. (currently amended) A method according to claim ~~2~~ 7 wherein the alkali is sodium hydroxide, sodium carbonate or mixture thereof.
9. (original) A method according to claim 1, characterised in that the solution is heated in the range of 40 to 115°C.
10. (original) A method according to claim 1, characterised in that the solution is heated in the range of 70-115°C.
11. (original) A method according to claim 9 wherein the solution is heated to about 100°C.
12. (previously presented) A method according to claim 1, characterised in that the solution is heated for a period of between 1 to 1,400 hours, thereby increasing antimicrobial activity of the polymers.
13. (previously presented) A method according to claim 1, characterised in that the solution is heated for a period in the range of from 4 to 60 hours.
14. (original) A method according to claim 11, characterized in that the hydroxylic solvent is polyethylene glycol and is present in the solution in an amount of between 50 and 99% by weight of the solution.
15. (original) A method according to claim 14, characterized in that polyethylene glycol is present in the solution in an amount of between 64 and 95% by weight of the solution.
16. (previously presented) A method according to claim 1, characterized by the addition of base or alkali to the polymers before and/or during heating, thereby enhancing the antimicrobial activity of the polymers.
17. (previously presented) A method according to claim 1, characterised in that the release of free acrolein monomer by the acrolein polymer is reduced.

18. (canceled)

19. (canceled)

20. (new) A method according to claim 1 further comprising the step of using the resulting solution for preparation of an antimicrobial formulation.

21. (new) A method according to claim 1 further comprising using the resulting solution for preparation of a preservative, disinfectant or antiseptic.